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LANL Wildland Fire Program Briefing



Wildland Fire Program



Manny J. L'Esperance

Updated May 2018



Operated by Los Alamos National Security, LLC for the U.S. Department of Energy's NNSA

Wildland Fire Mitigation and Readiness



- Introduction
- 2018 Wildland Fire Considerations and Outlook
- Current Mitigation Activities
 - Fire Roads Project
 - Fire Breaks Project
 - Defensible Space Project
- Current Readiness Activities
 - Emergency Preparedness Activities
 - Fire Restrictions, Stage II
 - Awareness Campaigns
- Questions/Answers

Wildland Fire Mitigation and Readiness Briefing (Cont.)

Introduction

- Fire season has arrived.
 - LANL collaborated with the Los Alamos County to implement Stage II Fire Restrictions. (Implemented May 7th)
 - LAFD and LANL SEO responded to a wildland fire (Ridgeland Fire) on 4/12/2018 in Los Alamos Canyon. *(Fire quickly suppressed)*
 - Chicoma Fire (42 acres) started on April 30th in the Espanola Ranger District (12 mi. North of Los Alamos). **Fire is listed as 100% contained as of 05/03/18.**
 - Southwest Coordination Area has been elevated to preparedness level III.
- Hazardous fuel conditions exist on LANL property.
- A wildland fire at LANL can impact the mission.
- Mitigation paramount to lowering risk profile.
- Preparedness key to effective response.





Southwest Coordination Center (SWCC) Predictive Services

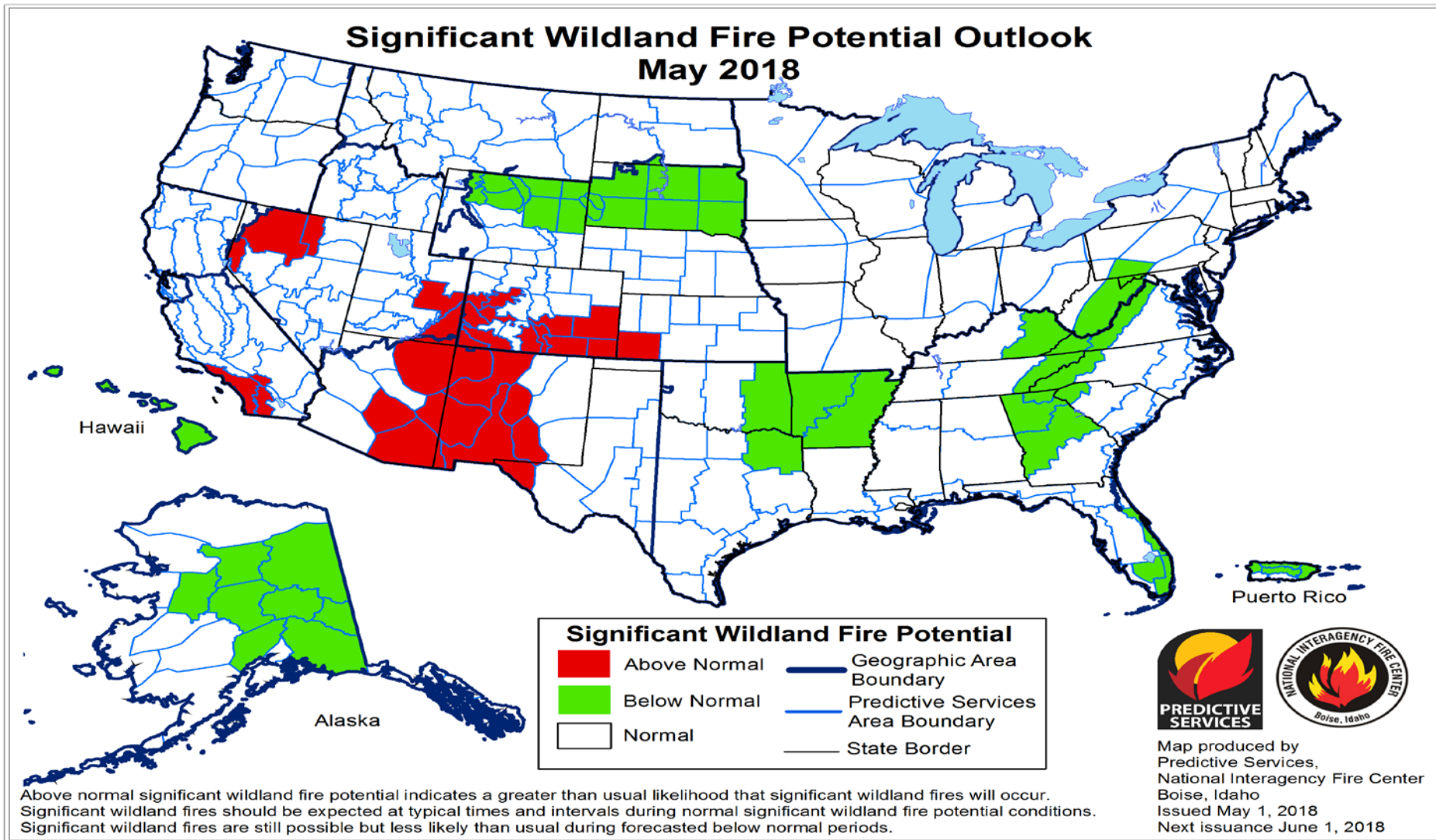


2018 Fire Season Considerations and Outlook



Operated by Los Alamos National Security, LLC for the U.S. Department of Energy's NNSA

Current Significant Wildland Fire Potential Outlook

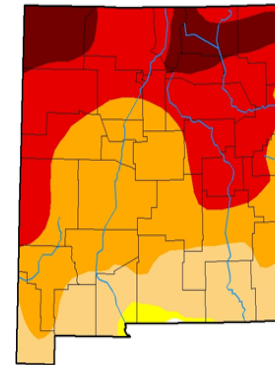


Fire Potential

- Drought conditions are expected to continue. (Los Alamos falls under the “**extreme drought**” category).
- Fuel moisture content is low resulting in increased fire potential.
- According to the May 1st USDA Weekly Weather and Crop Weather Bulletin, topsoil moisture in New Mexico was rated 90% short to very short while subsoil moisture was rated 89% short to very short.
- LANL Emergency Management monitors weather conditions on a daily basis.
- LANL Wildland Fire Program updates fire danger ratings on daily basis.

U.S. Drought Monitor
New Mexico

May 1, 2018
(Released Thursday, May 3, 2018)
Valid 8 a.m. EDT



Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
David Simeral
Western Regional Climate Center

USDA   
<http://droughtmonitor.unl.edu/>

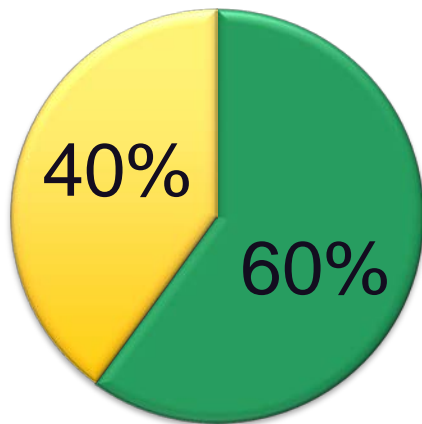
Fire Danger Rating: 🔥 High

LANLINSIDE

The daily fire danger rating can be found on the homepage of LANL Inside. If you click on the icon the fire restriction matrix will open up in a new tab.

Mitigation - Fire Roads

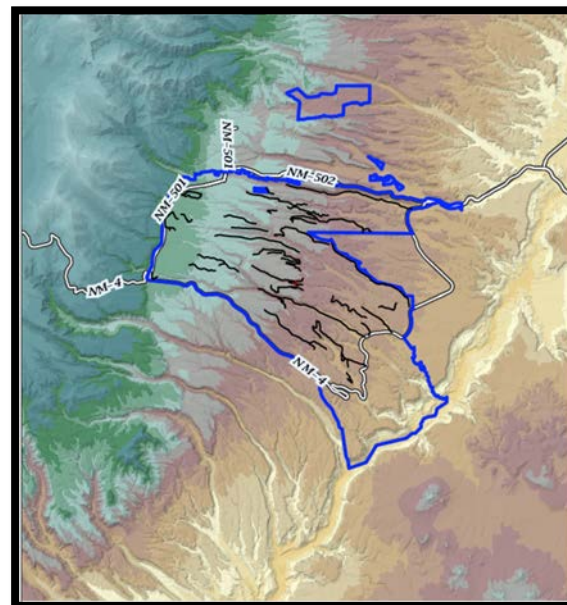
Fire Roads Project Status



■ Complete ■ Incomplete

- LANL is actively working a project to enhance and re-establish existing fire roads.
- The project is 60% completed.

- Fire roads are used to ensure responders and fire personnel have clear ingress and egress routes during wildland fire responses.
- Fire roads allow responders to access wildland areas that would not be accessible by main roadways.



Mitigation – Fire Roads (Cont.)

Current Conditions (Before and After)

BEFORE

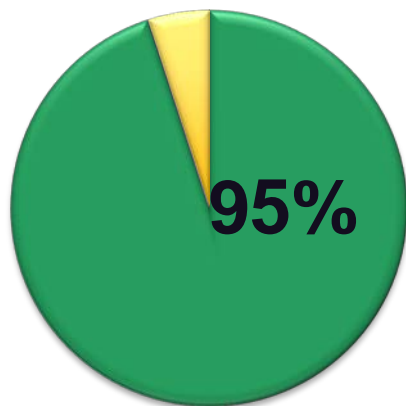


AFTER



Mitigation - Fire Breaks

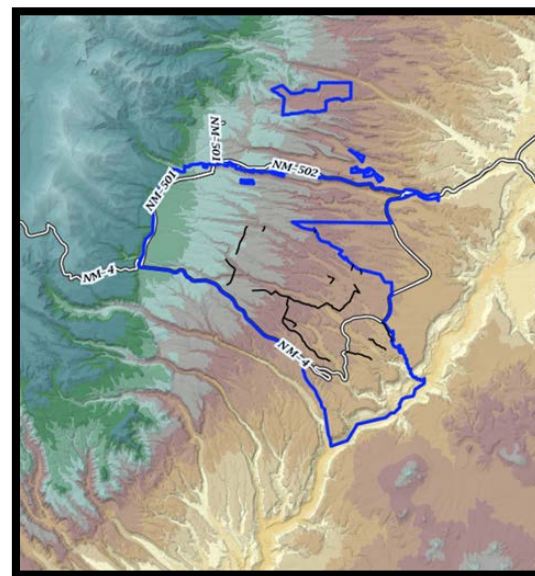
Fire Breaks Project Status



■ Complete ■ Incomplete

- LANL is currently working on a project to re-establish fire breaks within LANL property to ensure we are prepared and ready for this wildland fire season.
- The project is 95% completed and is working closely with LANL Environmental SMEs to ensure good stewardship of land and surrounding species.

- Fire breaks are strategically placed vegetation breaks that are utilized to slow down or stop the advancement of a wildland fire.
- Fire Breaks can be utilized as safety zones or anchor points for firefighters.



Mitigation - Fire Breaks (Cont.)

Current Conditions (Before and After)

BEFORE

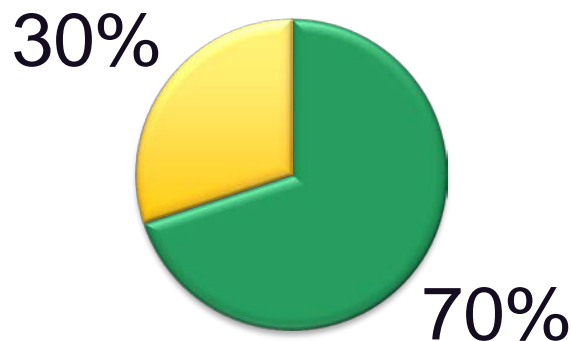


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Mitigation - Defensible Space

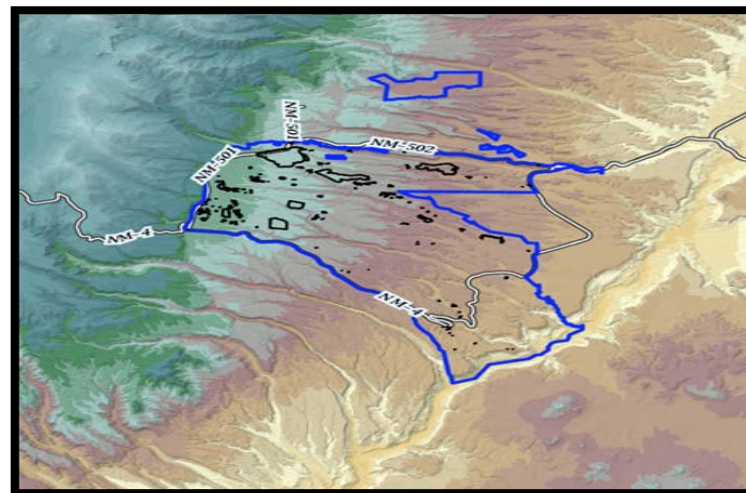
Defensible Space Project Status



■ Complete ■ Incomplete

- Creating defensible space is essential to improve a structure's chance of surviving a wildfire.
- The purpose is to create a buffer between the structure and surrounding vegetation to reduce the threat of direct flame contact or radiant heat.
- Defensible space also allows firefighters the ability to more effectively protect a structure.

- LANL is currently working on a project to re-establish pre-existing defensible space zones around LANL structures to mitigate the threat of wildland fires.
- The project encompasses approximately 1,500 total acres.
- Project is currently at 70% completed



Mitigation - Defensible Space (Cont.)

Current Conditions (Before and After)

BEFORE



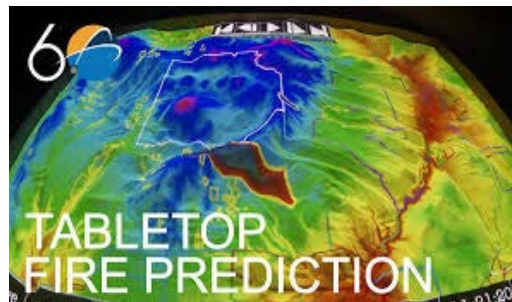
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Wildland Fire Readiness

Emergency Preparedness Activities

- LANL has enhanced wildland fire response preparedness with the implementation of new wildland fire response checklists to ensure LANL personnel are effectively and safely responding to fires.
- Identified positions within the LANL Emergency Operations Center (EOC) for offsite wildland fire response partners.
- LANL has enhanced the notification process with Santa Fe Dispatch to ensure we are alerted of fires within 10 miles.
- Tabletop drills on wildland fire response and coordination have been conducted in collaboration with LAFD and LANL Emergency Management.

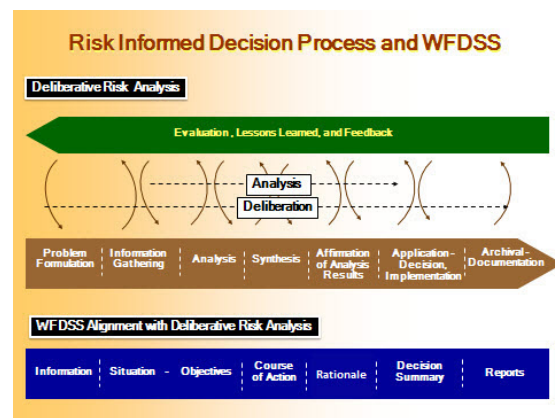


Wildland Fire Readiness (Cont.)

Emergency Preparedness Activities

Enhanced collaboration with LANL Computational Earth Services (ESS-16)

- Currently working with LANL fire modeling experts to integrate the Wildland Fire Decision Support System (WFDSS) fire modeling software.
- WFDSS is the modeling software utilized by agencies such as the Forest Service and National Park Service. (Integrating WFDSS will allow for a consistent approach to fire modeling and response across interagency counterparts).
- LANL to become pilot site for local fire weather forecast modeling (uses LANL terrain and localized weather variables).



Wildland Fire Readiness (Cont.)

Fire Restrictions. STAGE II Restrictions Implemented May 7th, 2018

Stage II Restrictions Include (SPECIFIC TO LANL):

- Work conducted in forested or undeveloped wildland areas of the Laboratory are restricted to mission essential activities. Recreational access to these areas is not restricted but may be as the season develops.
- Smoking is prohibited in all areas of the Laboratory except in designated smoking areas per Lab policy 909. Personnel working in wildland and undeveloped areas of the Lab are not allowed to smoke, even in vehicles.
- Use of explosives is restricted unless exempted.
- Discharging a firearm, air rifle or gas gun, unless exempted.
- Operation of internal combustion equipment except on a paved or hardened surface away from vegetation.
- Operation of any internal or external combustion equipment without a spark arresting device.
- Welding or operating an acetylene or other type of torch with an open flame outdoors, except with an approved spark/burn permit.
- All driving off established roadways is restricted to regulatory, mission, environmental, safety and health-essential activities, and require an approved IWD. Established roadways are defined as paved roads, gravel or base course. Fire roads are not established roadways.
- Everyone conducting work in a wildland or undeveloped area is responsible to ensure that the activity has not caused hot spots or fires. The work control documents must include a 30 min fire watch following the conclusion of work.



Wildland Fire Readiness (Cont.)

Fire Restrictions. STAGE II Restrictions Implemented May 7th, 2018

Stage II Restrictions Include (SPECIFIC TO LOS ALAMOS COUNTY):

- Building or maintaining, attending or using a fire, campfire, charcoal, or stove fire on public or private land. Propane grills can be used.
- Smoking. Smoking is allowed in vehicles, homes, and on paved/cleared surfaces only.
- Using fireworks, explosives or other incendiary devices in unapproved areas. Fireworks can only be used on paved/barren areas with adequate extinguishment capabilities.
- Operating a chainsaw in a forested area, or other equipment powered by an internal combustion engine, is prohibited.
- Operating or using any internal or external combustion engine in forested areas without a spark arresting device properly installed, maintained, and in effective working order.
- Welding or operating acetylene or other torch with open flame in forested areas. Permit for specific uses can be obtained
- Discharging firearms except where permitted by the Los Alamos Fire Marshal.



Wildland Fire Readiness (Cont.)

Awareness Campaigns: LANL and LAFD

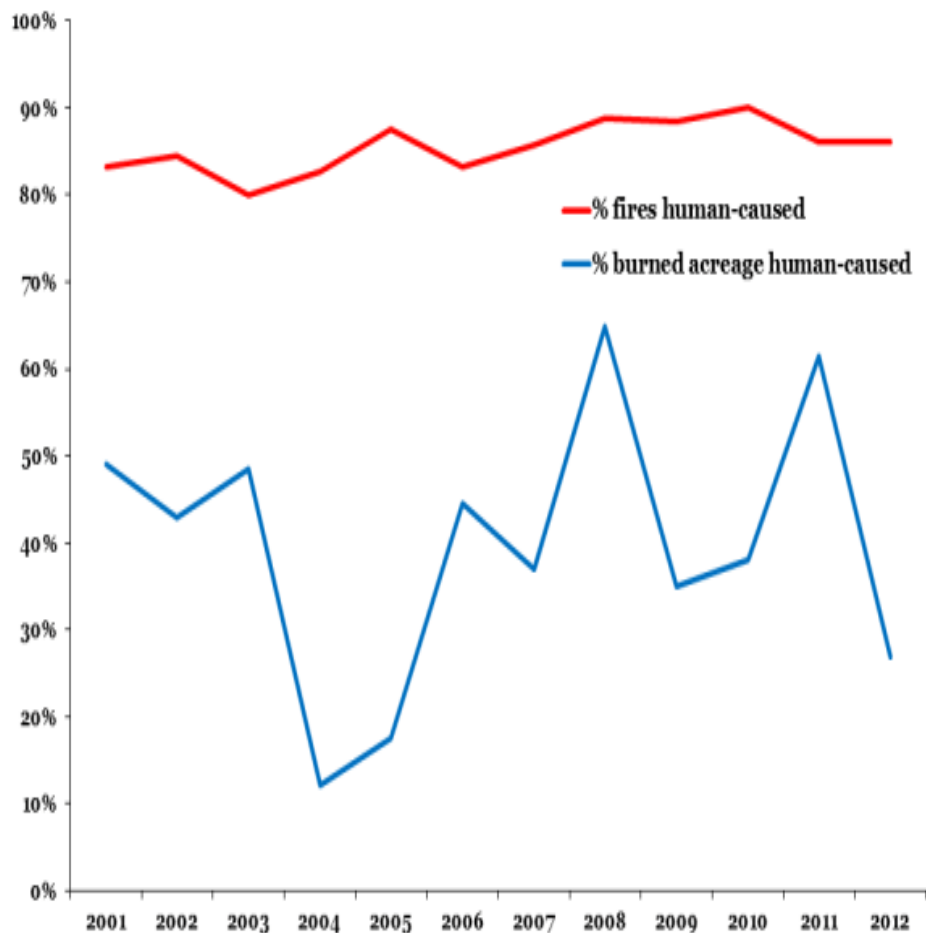
- LANL Wildland Fire Program Staff developed a wildland fire prevention newsletter that was delivered to the Institutional Worker Safety and Security Team and also distributed utilizing the Institutional Lessons Learned Software.
- Los Alamos County hosted “Wildfire Day” on March 31st that focused on promoting the importance of Fire Adapted Communities.
- Several communications have been posted on the LANL Homepage regarding restrictions and mitigation projects.
 - Los Alamos Fire Department has also posted key wildland fire communications to local news sources.
- LANL Wildland Fire Program Staff has delivered several wildland fire presentation for a variety of LANL audiences.



Parting Message

We all have a responsibility

Cause of U.S. wildfires: 2001-2012





Thank You For Your Time!

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